

Serial No.: 10/608,883
Group Art Unit: 2813

AMENDMENTS TO CLAIMS

- Please delete claims 12 and 16.
- Please amend pending claims 11, 13, 15, and 17 as indicated below.
- Please add new claims 23-28.
- A complete listing of all claims and their status in the application are as follows:

Claims 1-10 (canceled)

11. (currently amended) An integrated circuit comprising:
a semiconductor substrate having a semiconductor device provided thereon;
a dielectric layer further comprising a non-barrier dielectric material capable of being changed into a barrier dielectric material and having a opening provided therein, the dielectric layer around the opening of the barrier dielectric material which separates the non-barrier dielectric material from the opening, wherein the dielectric layer is of SiCOH as the non-barrier dielectric material; and
a conductor core over the dielectric layer to fill the opening and connect to the semiconductor device.
12. (canceled)
13. (currently amended) The integrated circuit as claimed in claim 11 wherein ~~the dielectric layer is of SiCOH as the non-barrier dielectric material and the dielectric layer is~~ of SiC(H) as the barrier dielectric material.
14. (original) The integrated circuit as claimed in claim 11 wherein the conductor core is of a material from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.
15. (currently amended) An integrated circuit comprising:
a semiconductor substrate having a semiconductor device provided thereon;
a dielectric layer further comprising a non-barrier dielectric material capable of being reduced into a barrier dielectric material and having a opening provided therein, the dielectric layer around the opening of the barrier dielectric material

Serial No.: 10/608,883

Group Art Unit: 2813

which separates the non-barrier dielectric material from the opening, wherein the dielectric layer is of SiCOH as the non-barrier dielectric material;

a seed layer over the dielectric layer to line the opening;

a conductor core over the seed layer to fill the opening and connect to the semiconductor device; and

planarizing the conductor core and the seed layer to form a channel.

16. (canceled)

17. (currently amended) The integrated circuit as claimed in claim 15 wherein ~~the dielectric layer is of SiCOH as the non-barrier dielectric material and the dielectric layer is of SiC(H) as the barrier dielectric material.~~

18. (previously presented) The integrated circuit as claimed in claim 15 wherein the seed layer and the conductor core are of a material from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.

19. (previously presented) The integrated circuit as claimed in claim 11 further comprising a gettering material on the barrier dielectric material.

20. (previously presented) The integrated circuit as claimed in claim 11 further comprising a gettering material of an atomic layer thickness on the barrier dielectric material.

21. (previously presented) The integrated circuit as claimed in claim 15 further comprising an oxygen getting material on the barrier dielectric material.

22. (previously presented) The integrated circuit as claimed in claim 15 further comprising an oxygen getting material of an atomic layer thickness on the barrier dielectric material.

23. (new) An integrated circuit comprising:

a semiconductor substrate having a semiconductor device provided thereon;

a dielectric layer further comprising a non-barrier dielectric material capable of being changed into a barrier dielectric material and having a opening provided therein, the dielectric layer around the opening of the barrier dielectric material which separates the non-barrier dielectric material from the opening;

a gettering material of an atomic layer thickness on the barrier dielectric material; and

Serial No.: 10/608,883

Group Art Unit: 2813

a conductor core over the dielectric layer to fill the opening and connect to the semiconductor device.

24. (new) The integrated circuit as claimed in claim 23 wherein the dielectric layer is of SiCOH as the non-barrier dielectric material and the dielectric layer is of SiC(H) as the barrier dielectric material.

25. (new) The integrated circuit as claimed in claim 23 wherein the conductor core is of a material from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.

26. (new) An integrated circuit comprising:

a semiconductor substrate having a semiconductor device provided thereon;

a dielectric layer further comprising a non-barrier dielectric material capable of being reduced into a barrier dielectric material and having a opening provided therein, the dielectric layer around the opening of the barrier dielectric material which separates the non-barrier dielectric material from the opening;

an oxygen getting material of an atomic layer thickness on the barrier dielectric material;

a seed layer over the dielectric layer to line the opening;

a conductor core over the seed layer to fill the opening and connect to the semiconductor device; and

planarizing the conductor core and the seed layer to form a channel.

27. (new) The integrated circuit as claimed in claim 26 wherein the dielectric layer is of SiCOH as the non-barrier dielectric material and the dielectric layer is of SiC(H) as the barrier dielectric material.

28. (new) The integrated circuit as claimed in claim 26 wherein the seed layer and the conductor core are of a material from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.